ZHIDKOVA, Z. V.

Kravets, T. P., Pes'kina, A. L. and Zhidkova, Z. V. Some new data on the absorption of light in solutions and in adscrbed layers. Pages 493 - 501.

SO: Bulletin of the Academy of Sciences, Izvestia, (USSR) Vol. 14, No. 4. (1950) Series on Physics.

ZHIDKOVA, Z. V.

USSR/Physics - Chromatography   Jul 51

"M. S. Tsvet's Chromatographic Method of Analysis," Z. V. Zhidkova

"Uspekh Fiz Nauk" Vol XLIV, No 3, pp 369-392

Chromatographic adsorption method devised by Tsvet is based on selective adsorption of one component contained by the compd. It is applied in analyses of foods and of pharmaceutical products. It facilitates the sepn of isomers and explains the connection between adsorptive ability of org substances and mol structure.

192T95

PA 192T95

DUBININ, M.M., akademik, otvetstvennyy redaktor; GAPON, Ye.N.; GAPON, T.B.;
ZHYPAKHINA, Ye.S.; RACHINSKIY, V.V.; BELEN'KAYA, I.M.; SHUVAEVA, O.M.;
ROGINSKIY, S.Z.; YANOVSKIY, N.I.; FUKS, N.A.; KISELEV, A.V.; NEYMARK, I.Ye.;
SLINYAKOVA, I.B.; KHATSET, F.I.; LOSEV} I.P.; TROSTYANSKAYA, Ye.B.;
TEVLINA, A.S.; DAVANKOV, A.B.; SALDADZE, K.M.; BRUMBERG, Ye.M.; ZHIDKOVA,
Z.V.; VEDENEEVA, N.Ye.; NAPOL'SKIY, S.A.; MIKHAYLOVA, Ye.A.; KAZANSKIY, B.A.;
RYABCHIKOV, D.I.; SHEMYAKIN, F.M.; KRETOVICH, V.L.;BUNDEL', A.A.; SAVINOV,
B.G.; VENDT, V.P.; EPSHTEYN, Ya.A.

[Research in the field of chromatography transactions of the All-Union
Conference on Chromatography, November 21-24, 1950] Issledovaniia v oblasti
khromatografii; trudy Vsesoiuznogo soveshchaniia po khromatografii, 21-24
noiabria 1950 g. Moskva, Izd-vo Akademii nauk SSSR, 1952. 225 p.
(MLRA 6:5)

1. Akademiya nauk SSSR. Otdelenie khimicheskikh nauk.
                              (Chromatographic analysis)

Zhidkova Z V

USSR/Physics - Spectral analysis

Card 1/1   Pub. 43 - 51/62

Authors   : Zhid... V. P.; Zhidkova, Z. V., Stepanov, V. I.; Ivanov, A. ... and
Toporets, A. S.

Title   : Determination of the true absorption spectrum ... of colored objects
by the spectrum of their diffusion reflection

Periodical :

Abstract   :

Institution : . . . .

Submitted   : . . . .

the particles will [...] [...]
of refraction n_c increases; the [...] $R(\lambda)$ curves are
only in broad lines similar to absorption curves $K(\lambda)$
for the same substance in bulk, the correlation being
better for higher value[...] of the degree of dispersion and
[...]

ZHIDKOVA, Z. V.

48-11-5/13

AUTHOR: Zhidkova, Z. V.

TITLE: On the Determination of the True Absorption of Adsorbed Substances
            According to the Spectra of Diffuse Reflection (Ob opredelenii istin-
            nogo pogloshcheniya adsorbirovannykh veshchestv po spektram diffuz-
            nogo otrazheniya).

PERIODICAL: Izvestiya AN SSSR Seriya Fizicheskaya, 1957, Vol. 21, Nr 11,
            pp. 1500-1501 (USSR).

ABSTRACT: This is the summary of a conference which is a continuation of a re-
            port by the author in ZhETE, 27, 459 (1954). The investigations on
            the determination of the true absorption $K(\lambda)$ of the substance being
            in dispersed state are continued to be developed according to the
            method of diffuse reflection. The investigation is extended on that
            sphere of adsorption-phenomena where adsorbed powders, the particles
            of which show only a painting of the surface, serve as objects. The
            problem becomes more complicated by the necessity of additionally
            evaluating and taking account of the physical-chemical factors acting
            on the absorption spectrum of the adsorbed substance. Powders of mol-
            ten and unmolten glass- and quartz particles with dyes adsorbed were
            investigated. The following statements were made on the strength of

Card 1/2

On the Determination of the True Absorption of Adsorbed Substances   48-11-5/13
According to the Spectra of Diffuse Reflection.

the tests: 1) The spectrum of the diffuse reflection, i. e. the spectrum - log $R(\lambda)$ of the adsorbed materia characterizes with respect to quality the absorption D (λ) of the film of the adsorbed substance: The positions of maxima and minima coincide with the spectra - log R (λ) and D (λ). When the D (λ) -spectra show some maxima, their relative size will be marked by the relative size of the maxima -log $R(\lambda)$. 2) The form of -log $R(\lambda)$ curve is somewhat changed in comparison to the D (λ) absorption curve of the film of the adsorbed substance in view of the special way of the light passing through the dispersed media. 3) In contrast to powders containing particles permeated with dye, the change of the geometric grain size of the adsorbent does not form an optic factor for the adsorbed materia which causes a change of the -log R (λ) spectrum. 4) When the physical-chemical properties of the "adsorbed" surface vary anyhow with the variation of the adsorbent dispersion, the -log $R(\lambda)$ -spectra can widely differ. The variation of the -log $R(\lambda)$ spectrum represents in these cases the actual change of state of the dye adsorbed in the powder with the change of the grain-size of the powder. There are 2 Slavic references.

AVAILABLE: Library of Congress.

Card 2/2

ZHIDKOVA, Z.V.

Effect of the adsorbed layer on the spectrum of diffuse reflection from adsorbates. Opt. i spektr. 7 no.3:426-431 S '59   (MIRA 13:3)
(Absorption spectra)

ZHIDKOVA, Z.V.; MEN'SHOVA, I.I.; IVANOVA, Ya.I.

Diffuse reflection spectra as dependent on the sorbate particle
size in ion-exchange sorption on resins. Zhur. fiz. khim. 38
no.5:1322-1323 My '64.   (MIRA 18:12)

1. Submitted June 20, 1963.

ZHIDKOVA, Z.V.; MEN'SHOVA, I.I. (Leningrad)

Spectral study of the ion exchange sorption of dyes on resins. Part 1.
545-550 Mr '65.

(MIRA 18:7)

SOV/51-7-3-20/21

AUTHOR: Zhidkova, Z.V.

TITLE: On the Effect of Thickness of the Adsorbed Layer on the Diffuse
            Reflection Spectrum of Adsorbates

PERIODICAL: Optika i spektroskopiya, 1959, Vol 7, Nr 3, pp 426-431 (USSR)

ABSTRACT: Adsorbed layers of various thicknesses of the following dyes were
            prepared:
            phenosafranine,
            3,1'-diethyl-5,6-dimethyl-8-chlorthia-4'-quinocarbocyanine iodide (dye Nr 3),
            1,3-diethyl-thia-2'-cyanine iodide (dye Nr 4),
            5,5'-dichloro-3,3',9-triethylcarbocyanine bromide (dye Nr 6).
            These dyes were supplied by Z.L. Petrushkina. Dimensions of the dye
            molecules were taken from published data (Refs 9, 10). The dyes were
            adsorbed on powders of glass TF-5, prepared as described earlier (Ref 11),
            and on powders of silver chloride. The adsorbed layer thickness was
            deduced from the adsorption isotherms. The absorption spectrum of the
            alcohol solutions of the dye Nr 3 is shown in Fig 3. Fig 4 shows the
            adsorption isotherm for the dye Nr 3 on silver chloride; the abscissa
            represents the equilibrium concentration of the dye in mole per litre (C_{eq})
            and the ordinate represents the amount (m) of the dye in grams adsorbed

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On the Effect of Thickness of the Adsorbed Layer on the Diffuse Reflection Spectrum of Adsorbates

on 1 gram of silver chloride or TF-5 glass. The results of Figs 4 and 5 refer to adsorption from alcohol-water solutions. Fig 5 shows that C_{eq}/m is a linear function of C_{eq} in the case of the dye Nr 3 adsorbed on AgCl. The diffuse reflection spectrum of the dye Nr 3 adsorbed on AgCl is shown in Fig 6 for different thicknesses of the adsorbed layer. Similar results were obtained for the other dyes. The author ends with the conclusion that the diffuse reflection spectra of adsorbed dyes are not greatly disturbed when the adsorbed-layer thickness is varied and consequently the diffuse reflection spectra can be used for qualitative determination of the absorption spectra. Acknowledgment is made to Prof. M.V. Savost'yanova for her advice. There are 6 figures and 21 references, 14 of which are Soviet, 4 English, 1 French, 1 Japanese and 1 translation into Russian.

SUBMITTED: August 20, 1958

Card 2/2

PRIKHOT'KO, A. F.

24(7)   p 3   PHASE I BOOK EXPLOITATION   SOV/1365

L'vov. Universytet

Materialy X Vessoyuznogo soveshchaniya po spektroskopii. t. 1:
Molekulyarnaya spektroskpiya (Papers of the 10th All-Union
Conference on Spectroscopy. Vol. 1: Molecular Spectroscopy)
(L'vov) Izd-vo L'vovskogo univ-ta, 1957. 499 p. 4,000 copies
printed. (Series: Its: Fizychnyy zbirnyk, vyp. 3/8/)

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po
spektroskopii. Ed.: Jaser, S.L.; Tech. Ed.: Saranyuk, T.V.;
Editorial Board: Landsberg, G.S., Academician (Resp. Ed., Deceased),
Neporent, B.S., Doctor of Physical and Mathematical Sciences,
Fabelinskiy, I.L., Doctor of Physical and Mathematical Sciences,
Fabrikant, V.A., Doctor of Physical and Mathematical Sciences,
Kornitskiy, V.G., Candidate of Technical Sciences, Rayskiy, S.M.,
Candidate of Physical and Mathematical Sciences, Klimovskiy, L.K.,
Candidate of Physical and Mathematical Sciences, Miliyanchuk, V.S.,
Candidate of Physical and Mathematical Sciences, and Glauberman,
A. Ye., Candidate of Physical and Mathematical Sciences.

Card 1/30

ZHIDKOVA, Z.V.

True absorption of light by adsorbed substances determined
from spectra of diffusion reflection of adsorbents. Trudy kom.
anal. khim. 8:110-114 '58.   (MIRA 11:8)

1.Gosudarstvennyy opticheskiy institut im. S.I. Vavilova.
      (Absorption spectra) (Adsorption)

ZHIDKOVA, Z.V.; SUSS, Yu.M.

Study of the influence of the degree of the dispersion and of the
nature of the adsorbent on the spectral curve of the absorption of
sensitizing dyes in an adsorbed state. Zhur. nauch. i prikl. fot.
i kin. 3 no.1:25-33 Ja-F '58. (MIRA 11:2)

1.Gosudarstvennyy opticheskiy institut im. S.I. Vavilova.
(Color photography)

ZHIDKOVA, Z.V.

Spectral study of ion-exchange sorption of dyes on resins.
Part 2. Zhur. fiz. khim. 39 no.8:1823-1827 Ag '65.
(MIRA 18:9)

85449

S/080/60/033/011/011/014
A003/A001

15.8109

AUTHORS: Shtraykhman, G. A., Al'shits, I. M., Zhidobina, I. A., Luchko, R. G.

TITLE: Thixotropic Systems on the Base of the Unsaturated ПН-1 (PN-1) Polyester Resin and Powdered Silica Gel

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol. 33, No. 11, pp. 2586-2593

TEXT: The thixotropic properties of suspensions were investigated consisting of unsaturated polyester resin and some types of powdered silica gel with a view to using them in the manufacture of articles made of glass plastics with vertical and inclined surfaces. In the experiments the PN-1 resin was used which is produced according to ВТУ 33024-59 ДСНХ (VTU 33024-59 LSNKh). Several types of powdered silica gel, like the types A (A), У-333 (U-333) and various experimental samples were studied. It was found that for the impregnation of glass fabrics on vertical surfaces only one third of binding material is needed to prevent flowing-off compared to other glass plastics products. The efficiency of the thixotropic filler depends on the degree of its dispersion. With an increase in dispersion the efficiency increases rapidly in the beginning, then the increase becomes slower and, after reaching a certain value, it has no appreciable effect

Card 1/2

SHTRAYKHMAN, G.A.; AL'SHITS, I.M.; ZHIDOBINA, I.A.; LUCHKO, R.G.

Thixotropic systems based on the unsaturated polyester resin
PN-1 and powdered silica gel. Zhur. prikl. khim. 33 no.11:2586-
2593 N '60.   (MIRA 14:4)
            (Resins, Synthetic)   (Silica)

ZHIDOBTSEV, V. M.

   "The Results of Liquidating the Foci of Enterobiosis in Children's Boarding
Institutes." Cand Med Sci, Khar'kov Medical Inst, Khar'kov, 1955.
(KL, No 18, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations
Defended at USSR Higher Educational Institutions (16).

ZHIDOMIROV, G.M ; MOLIN, Yu.N.

Differences in the widening of separate components of the
hyperfine structure in electron paramagnetic resonance spectra
of radicals with several α-protons. Zhur.strukt.khim. 3 no.6:
669-675 '62.   (MIRA 15:12)

1. Institut khimicheskoy kinetiki i goreniya Sibirskogo
otdeleniya AN SSSR, Novosibirsk.
                    (Radicals (Chemistry)—Spectra)

PARIYSKIY, G.B.; ZHIDOMIROV, G.M.; KAZANSKIY, V.B.

Spectrum of electron paramagnetic resonance of a methyl radical adsorbed on the silica gel surface. Zhur.strukt.khim. 4 no.3: 364-367 My-Je '63.   (MIRA 16:6)

1. Institut khimicheskoy fiziki AN SSSR.
                        (Methyl group—Spectra)

KAZANSKIY, V.B.; ALEKSANDROV, I.V.; ZHIDOMIROV, G.M.

Studying the interaction between free radicals and the
surface of a solid body (silica gel.) on the basis of
electron paramagnetic resonance spectra. Fiz. tver. tela 5 no.2:
649-659 F '63.   (MIRA 16:5)

1. Institut khimicheskoy fiziki AN SSSR, Moskva.
    (Silica paramagnetic resonance and relaxation--Spectra)

ALEKSANDROV, I.V.; ZHIDOMIROV, G.M.

Theory of spin-lattice relaxation in radicals in fluids.
Zhur. eksp. i teor. fiz. 40 no.6:1720-1724 Je '61.

(MIRA 14:8)

1. Institut khimicheskoy fiziki AN SSSR.
(Nuclear magnetic resonance and relaxation)
(Radicals (Chemistry))

24.4400

AUTHORS: Aleksandrov, I. V., Zhidomirov, G. M.

TITLE: Calculation of spin-lattice relaxation time for radicals in molecular crystals

TEXT: It is shown in this paper that the anisotropy of the g factor (or the anisotropy of the hyperfine structure) in the radicals of molecular crystals may lead to a spin-lattice relaxation time of the order of 10^{-3} sec.. The authors considered the spin-lattice relaxation of a radical in a magnetically dilute molecular crystal, and based their study on a spin Hamiltonian of the form $\mathcal{H} = \beta g_{\alpha\gamma} S_{\alpha} H_{\gamma} + A_{\alpha\gamma} S_{\alpha} I_{\gamma}$, where $g_{\alpha\gamma}$ and $A_{\alpha\gamma}$ are the tensors of spin-orbit and hyperfine interactions (A summation is to be made over the Greek indices). H_{α} is the component of the external magnetic field in the direction α; S_{α} and I_{α} are the projections of the

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Calculation of spin-lattice ...

spin operators of the electron and the nucleus on the α axis (the electron spin is assumed to interact with the spin of only one nucleus); and β is the Bohr magneton. Spin - orbit and hyperfine interactions are assumed to be axially symmetric, i.e., the tensors $g_{\alpha\gamma}$ and $A_{\alpha\gamma}$ are diagonal in a certain coordinate system 'x",y",z", rigidly attached to the radical. The orientational waves in the molecular crystal are assumed to be one-dimensional (cf. A.I. Ansel'm, N.N. Porfir'yeva. ZhETF, 19, 438, 1949), i.e. it is assumed that in the equilibrium position of the principal axis z" the tensors g and A coincide with the direction of propagation $\vec{\varkappa}$ of the vibrational wave. The deviations from the equilibrium position χ are assumed to be small. The angle between $\vec{H}$ and $\vec{\varkappa}$ is denoted by ψ. If χ lies in the plane of $\vec{\varkappa}$ and $\vec{H}$ (the z'y' plane in Fig. 1), one obtains for the spin Hamiltonian

$$\mathcal{H} = \beta H g_{zz}(\varphi) S_z + A(\varphi) S_z I_z + \beta H g_{zx}(\varphi,\chi) S_x + A_{zx}(\varphi,\chi) S_z I_x +$$
$$+ A_{zx}(\varphi\chi) S_x I_z, \qquad (3)$$

$$g_{zz}(\varphi) = g_\perp \sin^2\varphi + g_\parallel \cos^2\varphi, \qquad A_{zz}(\varphi) = A_\perp \sin^2\varphi + A_\parallel \cos^2\varphi,$$
$$g_{zx}(\varphi,\chi) = \Delta g \, [\chi \cos 2\varphi + \chi^2 \sin 2\varphi], \quad A_{zx}(\varphi,\chi) = \Delta A \, [-\chi \sin 2\varphi + \chi^2 \cos 2\varphi], (4)$$
$$A_{zx}(\varphi,\chi) = \Delta A \, [\chi \cos 2\varphi + \chi^2 \sin 2\varphi], \qquad \Delta g = g_\parallel - g_\perp, \quad \Delta A = A_\parallel - A_\perp.$$

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Calculation of spin-lattice ...   B102/B214

If the direction of polarization of the wave is rotated by $90°$ (χ lies in the z'x' plane, Fig. 2), one has

$$\mathcal{H} = \beta H g_{zz}(\varphi) S_z + A_{zz}(\varphi) S_z I_z + \beta H g_{zx} S_x + \beta H g_{yz} S_y + A_{xx} S_x I_x +$$
$$+ A_{xy} S_x I_y + A_{xz} S_x I_z + A_{yx} S_y I_x + A_{yy} S_y I_y + A_{yz} S_y I_z, \qquad (5)$$

$$g_{zz} = \tfrac{1}{2} \Delta g \chi^2 \sin 2\varphi, \qquad g_{yz} = \Delta g \chi \cos \varphi, \qquad A_{xx} = -\Delta A \chi^2 \sin^2 \varphi,$$
$$A_{xy} = A_{yx} = -\Delta A \chi \sin \varphi, \qquad A_{xz} = \tfrac{1}{2} \Delta A \chi^2 \sin 2\varphi, \qquad (6)$$
$$A_{yy} = \Delta A \chi^2, \qquad A_{yz} = \Delta A \chi \cos \varphi.$$

In both forms, the terms which are not important for the investigations have been neglected. For calculation of the probability of a relaxation transition between any two levels of the spin system, the spin Hamiltonian in the form

$$\mathcal{H} = \beta H g(\psi) S_z + A(\psi) S_z I_z + \chi R_1(\psi) + \chi^2 R_2(\psi) \qquad (7)$$

can be used for either case. Here $R_1(\psi)$ and $R_2(\psi)$ are linear combinations of the spin operators with non-vanishing matrix elements for the transition considered. If the term linear in χ (transition with absorption of one orientational phonon) is considered, one obtains for the probability

Card 3/7

Calculation of spin-lattice ...

of one relaxation transition per unit time

$$\omega_{12} = \frac{2\pi}{\hbar^2} |(1|R_1|2)|^2 \langle |\chi_{n,n+1}(\omega_L)|^2 \rangle g(\omega_L) \, ,$$

where $(1|R_1|2)$ is the matrix element between the spin states 1 and 2,
$\chi_{n,n+1}(\omega) = (n\hbar/2J\omega)^{1/2}$ is the matrix element between the nth and (n+1)th
states of the rotational oscillator (whose moment of inertia is J),
$g(\omega)d\omega$ is the number of the operational normal vibrations in the frequency
interval ω to $\omega + d\omega$; the symbol $\langle \rangle$ denotes the averaging over the quantum
number n, $\hbar\omega_L$ is the distance between the magnetic levels 1 and 2. In the
linear model $\omega = \Omega_2 \sqrt{1 + q \cos\eta}$; Ω_2 is the frequency of rotational
oscillations of an individual molecule, when all the remaining molecules
are in the equilibrium position, $0 \leq \eta \leq \pi$. One has

$$g(\omega) = \begin{cases} 2\omega (\pi q \Omega_2^2)^{-1} \left[1 - \frac{1}{q^2} \left(\frac{\omega^2}{\Omega_2^2} - 1 \right)^2 \right]^{-1/2} & \text{при } \Omega_2 \sqrt{1-|q|} < \omega < \Omega_2 \sqrt{1+|q|} \\ 0 & \text{при } \omega < \Omega_2 \sqrt{1-|q|} \text{ и при } \omega > \Omega_2 \sqrt{1+|q|}. \end{cases} \quad (10)$$

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S/056/61/041/001/008/021

Calculation of spin-lattice....   B102/B214

If one considers the effect of the last term in (7) (relaxation transition in which two phonons take part), one obtains analogously after averaging over n:

$$w_{12} = (2/\pi)\,(|(1|R_2|2)|/qJ\Omega_2^3)^2 \times$$

$$\times \int_{\Omega_{min}}^{\Omega_{max}-\omega_L} F(\omega)\left[\left(1 - \frac{1}{q^2}\left(\frac{\omega^2}{\Omega^2}-1\right)^2\right)\left(1 - \frac{1}{q^2}\left(\frac{(\omega+\omega_L)^2}{\Omega^2}-1\right)\right)\right]^{-1/2} d\omega, \quad (12)$$

$$F(\omega) = \exp\left(\hbar(\omega+\omega_L)/kT\right)/\left[(\exp(\hbar\omega/kT)-1)(\exp(\hbar(\omega+\omega_L)/kT)-1)\right].$$

A lower bound of (12) is

$$w_{12} > \frac{2}{\pi}\left(\frac{|(1|R_2|2)|}{qJ\Omega_2^3}\right)^2 \frac{\exp(\hbar\Omega_{max}/kT)}{(1-\exp(\hbar\Omega_{max}/kT))^2}(\Omega_{max}-\Omega_{min}). \quad (13)$$

In the most interesting case $\hbar\Omega_2/kT \ll 1$, one has

$$w_{12} = \frac{2}{\pi}\xi(q)\left(\frac{|(1|R_2|2)|}{q\Omega_2^3 J}\right)^2 \frac{1}{\Omega_2}\left(\frac{kT}{\hbar}\right)^2, \quad (14)$$

$$\xi(q) = \frac{27\,q^2\,(\sqrt{1+|q|}-\sqrt{1-|q|})}{4\,[1+\frac{1}{3}\sqrt{1+3q^2}]\,[3q^2-1+\sqrt{1+3q^2}]}.$$

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Calculation of spin-lattice...   S/056/61/041/001/008/021
                                        B102/B214

Finally, an estimate is given for a specific case (transition 1/2, 1/2 $\rightarrow$ - 1/2, - 1/2). It is found that $1/T_1 = w_{12} \approx 5 \cdot 10^7 T^2/\nu^5 J^2$, where $\nu = \Omega_2/2\pi$. If $J = 100 \cdot 10^{-40}$ g·cm^2, T = 200°K, one has $1/T_1 = w_{12} \approx 2 \cdot 10^3$ sec^{-1}. The result that T_1 can be essentially smaller than the value 1 sec expected according to Ref. 3, agrees with the result obtained in the laboratory of V. V. Voyevodskiy at the Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics, AS USSR). The authors thank Professor A.S. Kompaneyets and Professor N. D. Sokolov for discussions. There are 2 figures and 7 references: 4 Soviet-bloc and 3 non-Soviet-bloc. The three references to English-language publications read as follows: Ref. 1: H. M. McConnel. J.Chem.Phys. 25, 709, 1956; Ref. 3: D.I.E. Ingram. Tree Radicals as studied by Electron Spin Resonance, London, 1958; Ref. 5: I.H. van Vleck. Phys.Rev. 57, 426, 1940.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the Academy of Sciences USSR)

SUBMITTED: December 19, 1960

Card 6/7

LEBEDEV, Ya.S.; TSVETKOV, Yu.D.; ZHIDOMIROV, G.M.

Analysis of asymmetrical lines in electron paramagnetic resonance
spectra as a method of studying internal movements in polymers.
Zhur.strukt.khim. 3 no.1:21-27 Ja-F '62.   (MIRA 15:3)

1. Institut khimicheskoy fiziki AN SSSR i Institut khimicheskoy
kinetiki i goreniya Sibirskogo otdeleniya AN SSSR.
                    (Polymers—Spectra)

S/192/62/003/005/001/003
D267/D308

AUTHORS: Zhidomirov, G.M., Lebedev, Ya.S. and Tsvetkov, Yu.D.

TITLE: Form of line in the electronic paramagnetic resonance spectra of peroxide type radicals in oriented polymers

PERIODICAL: Zhurnal strukturnoy khimii, v. 3, no. 5, 1962, 541-545

TEXT: It was shown in an earlier paper that the spectrum of peroxide radicals (RO_2^-) in oriented specimens depends on the orientation of the specimen in the magnetic field. To calculate the line form in the e.p.r. spectrum for oriented specimens the authors assumed that (1) the peroxide radical has an axial symmetry of the g factor and (2) the symmetry axes of this factor are distributed randomly in the plane S at right angles to the orientation direction of polymer chains. The calculation has been carried out to the end for the case of an infinitely narrow individual line, when the external magnetic field is parallel to the orientation axis. It has

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Form of line ...

S/192/62/003/005/001/003
D267/D308

been shown that the form of the e.p.r. line can be used for determining the degree of orientation of the chains (such estimation has been carried out for a Teflon specimen oriented by stretching). The paper ends with a discussion of the structure of peroxide type radicals (on the strength of the data showing the temperature dependence of the form of e.p.r. lines). There are 3 figures.

ASSOCIATION: Institut khimicheskoy kinetiki i goreniya SO AN
               Novosibirsk SSSR (Institute of Chemical Kinetics
               and Combustion, Siberian Branch of the AS Novosibirsk,
               USSR); Institut khimicheskoy fiziki AN SSSR (Insti-
               tute of Chemical Physics, AS USSR)

SUBMITTED: June 17, 1961

Card 2/2

ZHIDOMIROV, G.M.; BUBNOV, N.N.

Electronic paramagnetic resonance spectrum of the cyclopentyl
radical. Opt. i spektr. 12 no.3:445-446 Mr '62.   (MIRA 15:3)
     (Cyclopentane--Spectra) (Paramagnetic resonance and relaxation)

45354

S/181/63/005/002/043/051
B102/B186

5.4400

AUTHORS: Kazanskiy, V. B., Pariyskiy, G. B., Aleksandrov, I. V., and
            Zhidomirov, G. M.

TITLE: Investigation of the interaction of free radicals with the
            surface of a solid (silica gel) by the e.p.r spectra

PERIODICAL: Fizika tverdogo tela, v. 5, no. 2, 1963, 649 - 659

TEXT: The authors give a detailed analysis of the e.p.r. spectra of atomic
hydrogen, methyl, ethyl and polymer radicals adsorbed on several types of
silica gels (specific surfaces 290, 300, and 700 m^2/g). The studies were
made in order to obtain information on the nature and the geometry of
binding and the motions in the adsorbed state. The e.p.r. spectra were
taken at $\lambda = 3.2$ cm and a hf modulation frequency of 1 Mc. The epr spec-
trum of adsorbed hydrogen is characterized by a hyperfine splitting constant
of A = 1411±0.1 Mc (for free hydrogen it is A$_0$ = 1420.40 Mc) and a great
asymmetry of the components. On the basis of the present authors' earlier
results (Kinetika i kataliz I, no. 4, 559, 1960) the hyperfine splitting

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Investigation of the ...

constants $A_\perp$ and $A_\parallel$ for $\vec{H} \perp \vec{E}$ and $\vec{H} \parallel \vec{E}$) are calculated:

$$A_\perp = A_{xx} = A_{yy} = A - \frac{47}{60} \frac{\mu_e \mu_n}{a_0^3} \lambda^2_{\parallel} \qquad (4a)$$

$$A_\parallel = A_{zz} = A + \frac{47}{30} \frac{\mu_e \mu_n}{a^3} \lambda^2_{\parallel} \qquad (4b)$$

$$A = \frac{8}{3} \frac{\mu_e \mu_n}{a^3} (1 - 15.5\lambda^2) = A_0 (1 - 15.5\lambda^2)_{\parallel} \qquad (4c)$$

$\lambda = a^2 E/e$. The anisotropy of hyperfine splitting is obtained as

$$A_\parallel - A_\perp = \frac{47}{20} \cdot \frac{\mu_e \mu_n}{a^3} = \frac{141}{160} A_0 \lambda^2.$$

(5); z $\parallel$ E and perpendicular to the surface. The anisotropy of the g-factor, $\Delta g = g_\parallel - g_\perp$, is very weak ($\sim 10^{-6}$) and not to be observed in experiment. The polarization energy of the hydrogen atom in the E field was obtained as ~ 1 kcal/mole. The apr. spectrum of deuterium atoms adsorbed on SiO_2 is considerably narrower and is symmetrical, with smaller amplitudes of the side components. The e.p.r. spectrum of the methyl radicals was measured at $-196°C$; it consists of four hyperfine structural lines with a distance of 23.1 ± 0.1 oe and with an amplitude ratio of 1 : 8.5 : 13 : 2.5 instead of 1 : 3 : 3 : 1. This can be ex-

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Investigation of the ...   S/181/63/005/002/043/05%
                                            B102/B186

plained by the loss of rotational degrees of freedom of CH_3 on adsorption.
The e.p.r. spectrum of the ethyl radical consists of 12 lines and can be
considered as quadruplet arising on hyperfine interaction of the unpaired
electron with the protons of the CH_3 group, each quadruplet line being
split into a triplet due to interaction with the CH_2 protons. The e.p.r.
spectrum of the polymer radical consists of six broad poorly resolved com-
ponents ($\sim$25 oe distance). The results show that the e.p.r. spectra of ad-
sorbed radicals differ considerably from those of free radicals or of radi-
cals stabilized in solid polycrystalline matrices. The surface effect be-
comes apparent in a reduction of the hyperfine splitting constant (for hydro-
gen in a deformation of its electron shell) and in a change of the character
of motion due to losses of degrees of freedom or of equilibrium positions
of the radicals in the matrices. There are 9 figures and 1 table.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR, Moskva (Institute of
              Chemical Physics AS USSR, Moscow)

SUBMITTED: September 27, 1962
Card 3/3

ZHIDOMIROV, G.M.; SCHASTNEV, P.V.

Determination of the integrals of dipole-dipole hyperfine in-
teraction of electron with nuclei. Zhur. strukt. khim. 6 no. 4:
655-656 Jl-Ag '65   (MIRA 19:1)

1. Ins+!tut khimicheskoy kinetiki i goreniya Sibirskogo otdeleniya
AN SSSR, g. Novosibirsk. Submitted May 27, 1965.

ZHIDOMIROV, G.M.; SCHASTNEV, P.V.

Hyperfine interaction of unpaired electrons with methyl group
nuclei in ¶pelectron radicals. Teoret. i eksper. khim. 1 no. 5:
649-654 S-O '65   (MIRA 19:1)

1. Institut khimicheskoy kinetiki i goreniya ʻʼibirskogo ot-
deleniya AN SSSR, Novosibirsk. Submitted June 23, 1965.

YUDOVICH, V.G.; KHLEBORODOV, A.D.; SOLONEVICH, Ye.A.; VEYTS, V.L.;
PANOV,F.S.; BELYAYEV, A.N.; ALAD'IN, O.I.; OSIPOV, V.F.;
VOROB'YEV, A.I.; PROKOF'YEV, Yu.V.; SOLOV'YEV, Yu.A.;
KUZ'MIN, A.V.; ZHIDONIS, V.Yu.; ZOLIN, A.V.; YATSUK Ye.F.
DOBROSLAVSKIY, V.L.; TROFIMOV, Ye.N.; DRYAGIN, Ye.R.;
KOROLEV, V.F.; KERIMOV, N.B.; KRAVCHENKO, A.S.; RIVLIN, V.A.;
GURCHENKO, A.P.; KRUGLIKOV, T.P.; CHERNYAKOV, F.A.; ARKHIPOV,
N.K.

Authors' certificates and patents. Mashinostroenie no.1:101-
103 Ja-F '65.   (MIRA 18:4)

ZHIDOMIROV, G.M., kand.fiz.-matem.nauk

All-European confer   on the use of electric paramagentic
resonance i. chemistry held in England. Vest.AN SSSR 35 no.8:75
Ag '65.   (MIRA 18:8)

SCHASTNEV, P.V.; ZHIDOMIROV, G.M.

Isotropic hyperfine splitting on a fluorine nucleus in electron paramagnetic resonance spectra of free radicals. Zhur. strukt. khim. 5 no.6:839-844 N-D '64.   (MIRA 18:4)

1. Institut khimicheskoy kinetiki i goreniya Sibirskogo otdeleniya AN SSSR, Novosibirsk.

ZHIDOMIROV, G.M.; TSVETKOV, Yu.D.

Use of the electron paramagnetic resonance method in studying
conformations of free radicals in some alicyclic compounds. Opt.
i spektr. 17 no.1:67-72 Jl '64.   (MIRA 17:9)

SCHASTNEV, P.V.; ZHIDOMIROV, G.M.

Semiempirical theory of isotopic superfine splitting in the
electron paramagnetic resonance spectra of free radicals.
Dokl. AN SSSR 153 no.1:151-153 N '63.   (MIRA 17:1)

1. Institut khimicheskoy kinetiki i goreniya Sibirskogo
otdeleniya AN SSSR. Predstavleno akademikom V.N. Kondrat'yevym.

VASAUSKAS, S.S.; ZHIDONIS, V.Yu.

Hardness diagram and its use in determining the characteristics
of metal strength. Zav.lab. 28 no.5:605-608 '62.   (MIRA 15:6)

1. Kaunasskiy politekhnicheskiy institut.
                    (Metals--Testing) (Brinell test)

37054
S/032/62/028/005/008/009
B117/B101

18.8700

AUTHORS: Vasauskas, S. S., and Zhidonis, V. Yu.

TITLE: The hardness diagram and its application in determining the
strength characteristics of metals

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 5, 1962, 605-608

TEXT: A method of testing metal samples for their elastic limit, yield and
breaking points by using only Brinell's hardness test, no tensile tests
being required, is recommended. It is shown that the change in the hardness
number, depending on the degree of plastic deformation, can be observed by
using conical indenting tools (made of alloys with HRA up to 80) with
different point angles (0-180°). The deformation, which was found to
depend on the point angle of the cone, can be calculated and is proportional
to the specific transverse contraction of the sample in tensile tests. A
diagram based on the ratio between the hardness number and the point angle
of the indenting cone shows that the critical value of hardness and strength
can be determined with one indenting cone only: yield point of steels with

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The hardness diagram and its ...

S/032/62/028/003/008/009
B117/B101

a cone whose point angle is $\varphi = 160^\circ$; breaking point of steels and commercial nonferrous metals with a cone of $\varphi = 120^\circ$, etc. Yield and breaking points under elongation were determined from the respective hardness numbers, and the following relations were found: $\sigma_S = 0.25\ H_S$ and $\sigma_B = 0.30\ H_B$. (H_S is the hardness number in the indentation of a cone of $\varphi = 160^\circ$, and H_B the one for $\varphi = 120^\circ$). H_S and H_B correspond to the critical values of the hardness numbers on the hardness diagram and can be found with an indenting tool of any shape. There are 5 figures.

ASSOCIATION: Kaunasskiy politekhnicheskiy institut (Kaunas Polytechnic Institute)

Card 2/2

PETROVSKIY, B.V.; SOLOV'YEV, G.M.; KHODAS, M.Ya.; ARKATOV, V.A.;
ZHIDOVETSKAYA, A.Sh.; TUMASHEVA, N.N.

Some hematological and biochemical indices in experimental
extracorporeal circulation; preliminary report. Trudy 1-go
MMI 33:15-24 '64.   (MIRA 18:3)

KHODAS, M.Ya. (Moskva, Krasnopresnenskaya nab.d.1/2,kv.163);
PYATNITSKAYA, G.Kh.; ZHIDOVETSKAYA, A.S.

Neutralization of heparin by protamine sulfate during artificial
blood circulation. Klin.khir. no.7:59-62 Jl '62. (MIRA 15:9)

1. Laboratoriya iskusstvennogo krovoobrashcheniya (nauchnyy
rukovoditel' - deystvitel'nyy chlen AMN SSSR prof. B.V.Petrovskiy,
zav. - koktor med.nauk G.M.Solov'yev) Nauchno-issledovatel'skogo
instituta eksperimental'noy khirurgicheskoy apparatury i instrumen-
tariya na baze gospital'noy khirurgicheskoy kliniki.
(HEPARIN) (PROTAMINES) (BLOOD—CIRCULATION, ARTIFICIAL)

GALANOV, I.G., otv. red.; MATLAKHOV, S.G., otv. red.; POLESIN,
Ya.L., red.; BOGOMOLOV, A.I., red.; ZHELEZNYAKOVA, M.A.,
red.; ZHIDOVETSKIY, B.V., red.; ZIL'BERSHTEYN, I.A.,
red.; KANER, I.Ye., red.; KLYUYEVA, Ye.P., red.; KOZLOVA,
Ye.I., red.; MAKAROV, A.D., red.; SAMARTSEV, A.I., red.;
SOLOPKO, A.P., red.; TIKHONOV, V.A., red.; VOLKOVA, V.A.,
ved. red.

[Safety regulations in the gas industry; regulations
obligatory for all ministries, departments, and organiza-
tions] Pravila bezopasnosti v gazovom khoziaistve; pravila
obiazatel'ny dlia vsekh ministerstv, vedomstv i organizatsii.
Perer. i dop. izd.   Moskva, Nedra, 1965. 143 p.
                                        (MIRA 18:3)
1. Russia (1917- R.S.F.S.R.) Gosudarstvennyy komitet po nad-
zoru za bezopasnym vedeniem rabot v promyshlennosti i gorno-
mu nadzoru.

ZHIDOVICH, A.I., kand. tekhn. nauk

Selecting the type of regulators for the control of the process
of lumber drying in lumber kilns. Der. prom. 13 no.8:10-12 Ag '64.
(MIRA 17:11)
1. TSentral'nyy nauchno-issledovatel'skiy institut vspomogatel'nykh
izdeliy i zapasnykh detaley k tekstil'nomu oborudovaniyu.

ZHIDOVICH, A.I.,kand.tekhn.nauk

Vibration control of rapidly revolving parts on looms and
twisting machines. Tekst.prom. 19 no.1:89-91   Ja '59.
(MIRA 12:1)

(Textile machinery--Vibration)

ZHIDOVICH, A.I.; VARGA, R.Sh.

New electronic moisture tester. Tekst. prom. 19 no.5:96 My
'59.   (MIRA 12:10)
        (Electronic instruments)

ZHIDOVICH, A.I.,kand.tekhn.nauk

Vibration control of rapidly rotating parts on spinning and
twisting machines. Tekst.prom. 19 no.2:69-70 F '59.
                                              (MIRA 12:5)
                (Textile machinery--Vibration)

ZHIDOVICH, A. I.

ZHIDOVICH, A. I. -- "Guarantee of Single-Form Fitting of Wooden Bobbins on
Cotton Spinning Machines." Sub 9 Oct 52, Moscow Textile Inst
(Dissertation for the Degree of Candidate in Technical Sciences)

SO: VECHERNAYA MOSKVA, JANUARY-DECEMBER 1952

ZHIDOVICH, A.I., kand.tekhn.nauk; VARGA, R.Sh., kand.tekhn.nauk; KONKIN, O.N.,
inzh.; KURZIN, B.A., inzh.

Automatic regulator for controlling the drying of the wood of hardwood
species. Der. prom. 12 no.11:6-7 N '63.   (MIRA 17:1)

ZHIDOVICH,A.I., kandidat tekhnicheskikh nauk

Measures to increase the productivity of silk twisters. Tekst.prom.
15 no.8:26-28 Ag'55.   (MIRA 8:11)
                    (Silk manufacture)

ZHIDOVICH, A.I., kandidat tekhnicheskikh nauk; BREYDBARD, B.M., mladshiy
nauchnyy sotrudnik.

For an efficient increase in cop weight for cotton spinning
machines. Tekst.prom. 16 no.11:20-23 N '56.   (MLRA 9:12)
                    (Spinning machinery)

112-57-7-14883

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1957, Nr 7, p 155 (USSR)

AUTHOR: Zhidovich, A. I., Varga, R. Sh., Fuks, I. I., Ivanov, V. D., and
    Trushin, Ye. M.

TITLE: Device for Checking the Dynamic Balancing of PBR-1 Rove Flyers, TsNII
    Mashdetal' System (Pribor dlya proverki dinamicheskoy balansirovki
    rovnichnykh rogulek PBR-1 sistemy TsNII Mashdetali)

PERIODICAL: Nauch.-issled. tr. Tsentr. n.-i. in-t vspomogat. izdeliy i zapas
    detaley k tekstil'n. oborud., 1956, Nr 4, pp 32-44

ABSTRACT: Bibliographic entry.

Card 1/1

ZHIDOVICH, A.L., kandidat tekhnicheskikh nauk; VARGA, R.Sh., kandidat tekhnicheskikh nauk; FUKS, I.I.; IVANOV, V.D., glavnyy konstruktor; TRUSHIN, Ye.M., inzhener-tekhnolog.

Instrument for testing the balance of flyer guides. Tekst.prom. 14 no.6:32-34 Je '54.

(MLRA 7:7)

1. Glavnyy inzhener zavoda im. 1 Maya (for Fuks)
   (Spinning machinery)

ZHIDOVICH, A. I., kand. tekhn. nauk

The EVBP-4 and EVBP-2 electronic hygrometers. Biul. tekh.-ekon.
inform. Gos. nauch.-issl. inst. nauch. i tekh. inform. no.12:
51-52 '62.
                    (Hygrometry)   (MIRA 16:1)

TSAREVA, T.I.; ZHIDOVICH, O.V.

Physiological activity of water-soluble peat tar. Dokl. AN BSSR
7 no.11:779-781 N '63.

(MIRA 17:9)

1. Institut biologii AN BSSR. Predstavleno akademikom AN BSSR T.N.
Godnevym.

ZHIDOVICH, S., gvardii polkovnik

Control of battery fire. Voen.vest. 40 no.2:79-81 F '61.

(Russia--Army--Artillery)

(MIRA 14:2)

ZHIDOVINOV, N. Ya., Cand Geol-Min Sci — (diss) "Apsheron deposits
of western and northern Prikaspiy." Saratov, 1959. 18 pp (Min of

Higher Education USSR. Saratov State U im N.G. Chernyshevskiy).

170 copies (KL,38-59, 115)

21

ZHIDOVINOV, N.Ya.

Stratigraphy of the Apsheron stage in the western and northern
Caspian Sea region. Uch.zap.SGU 65:99-103 '59.   (MIRA 16:1)
(Caspian Sea region--Geology, Stratigraphic)

ZHIDOVINOV, N.Ya.; ROMANOV, A.A.

Stratigraphy of Quaternary sediments in the Volga-Ilovlya and the southern part of the Volga-Don interfluve. Uch.zap. SGU 74: 55-65 '60.

(MIRA 15:7)

(Volga Valley—Geology, Stratigraphic)

ZHIDOVINOV, N.Ya.

Distribution of rocks and Apsheron stage thicknesses in limits of the western and northern Caspian sea region. Nauch. dokl. vys. shkoly; geol.-geog. nauki no.3:92-98 '58.   (MIRA 12:1)

1.Saratovskiy universitet,geologicheskiy fakul'tet, kafedra istoricheskoy geologii.
                    (Caspian Sea region--Geology, Structural)

ZHIDOVTSEV, N.A.

Durability of welded seams of casing pipes. Izv. vys. ucheb. zav.;
neft' i gaz no. 5:123-130 '58.   (MIRA 11:8)

1. L'vovskiy politekhnicheskiy institut.
                         (Pipe)

ZHIDOVTSEV, N.A., kand.tekhn.nauk

Experimental studies of the stability of casing weld joints. Nauch.-
zap.Ukrniiproekta no.4:46-68 '61.

(Oil well casing)   (MIRA 15:1)

ZHIDOVTSEV, N.A., kand.tekhn.nauk

Determination of the power consumed by a roller bit. Nauch.
zap. Ukrniiproekta no.3:37-41 '60.   (MIRA 14:12)
                    (Boring)

ZHIDOVTSEV, N.A.; OSINCHUK, Z.P.

Effect of hydrostatic pressure on drilling indices of the Dolina area. Neft. i gaz. prom. no.2:17-21 Ap-Je '62.   (MIRA 15:6)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut ugol'noy, rudnoy, neftyanoy i gazovoy promyshlennosti.
    (Dolina region (Stanislav Province)--Oil well drilling)

ZHIDOVTSEV, N.A.; SEYFI, R.N.; GIL'MAN, K.M.

Some results of tests of OM575A-8T bits manufactured from steel of electroslag remelting. Neft. i gaz. prom. no.2:18-21 Ap-Je '65.
(MIRA 18:6)

ZHIDOVTSEV, N.A., kand.tekhn.nauk; UZUMOV, E.I., inzh.; YAREMIYCHUK, R.S.,
inzh.; TISHCHENKO, A.V., inzh.; KRITSUK, A.A., inzh.

Collapse of protective strings on the Zaluzh area. Nauch. zap.
Ukrniiproekta no.9:33-40 '62.   (MIRA 16:7)
         (Carpathian Mountain region--Boring machinery)

KOL'CHENKO, A.V., kand.tekhn.nauk; ZHIDOVTSEV, N.A., kand.tekhn.nauk;
OSINCHUK, Z.P., inzh.

Effect of hydrostatic pressure on the drillability of rocks.
Nauch. zap. Ukrniiproekta no.9:15-23 '62.   (MIRA 16:7)
    (Oil well drilling) (Oil well drilling fluids)

LUTSENKO, N.A., kand.tekhn.nauk; ZHIDOVTSEV, N.A., kand.tekhn.nauk;
OBRAZTSOV, O.I., inzh.

Well cementing on the Shebelinka and Rudki gas fields. Nauch.
zap. Ukrniiproekta no.9:49-55 '62.   (MIRA 16:7)
        (Sebelinka region--Gas well cementing)
        (Lvov Province--Gas well cementing)

ZHIDOVTSEV, N.A., kand.tekhn.nauk; KRITSUK, A.A., inzh.; SKACHEDUB, A.M., inzh.

Arrangement of the lower part of a drilling pipe. Nauch. zap.
Ukrniiproekta no.9:41-48 '62.   (MIRA 16:7)
(Dolina region (Stanislav Province)--Oil well drilling--Equipment
                              and supplies)

KOL'CHENKO, A.V., kand.tekhn.nauk; ZHIDOVTSEV, N.A., kand.tekhn.nauk

Results of industrial testing and introduction of turbodrill
axial supporting elements with replaceable rubber parts. Nauch.
zap. Ukrniiproekta no.9:3-14 . '62.   (MIRA 16:7)
                              (Turbodrills)

TSARITSYN, Viktor Vasil'yevich, doktor tekhn. nauk, prof.; ZHIDOVTSEV,
Nikolay Aleksandrovich, kand. tekhn. nauk; PONYAVSKIY, V.I.,
inzh., retsenzent; PECHKOVSKIY, V.I., kand. tekhn. nauk, red.;
KOCHERGA, N.T., inzh., red. izd-va; BEREZOVYY, V.N., tekhn.red.

[Drilling with roller bits]Burenie sharoshechnymi dolotami.
Kiev, Gostekhizdat USSR, 1962. 134 p.   (MIRA 16:2)
                    (Boring machinery)

ZHIDOVTSEV, N.A., kand.tekhn.nauk

Preliminary results of studies of the operation of roller bits.
Nauch.zap. Ukrniiproekta no.3:124-125 '60.   (MIRA 14:12)
                        (Boring machinery)

TSARITSYN, V.V., doktor tekhn.nauk; ZHIDOVTSEV, N.A., kand.tekhn.nauk

Choice of bits based on the pitch of roller teeth. Nauch.zap.
Ukrniiproekta no.3:25-36 '60.   (MIRA 14:12)
                              (Boring machinery)

ZHIDOVTSEV, N.A., kand. tekhn. nauk; KOL'CHENKO, A.V., kand. tekhn. nauk

Wearing out diamond bits in rotary drilling. Neft. i gaz. prom.
no.2:23-28 Ap-Je '63.   (MIRA 17:11)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut
ugol'noy, rudnoy, neftyanoy i gazovoy promyshlennosti UkrSSR.

ZHIDOVTSEV, N.A.; SHCHUKIN, N.V.

Comparison between the efficiency of deep turbodrilling and
deep rotary drilling in the northwestern part of the Dnieper-
Donets Lowland. Neft. i gaz. prom. 3:24-27 Jl-S '65.
                                              (MIRA 18:11)

NECHAYEVSKAYA, M.R.; ZHIDOVTSEV, V.M.; CHERKAS, G.P.; ZIMINA, O.I.;
KALINICHENKO, N.F.

Effect of X-irradiation on immunity to the pathogens of gas gangrene
and tetanus. Zhur.mikrobiol.epid.i immun. 32 no.1:113-117 Ja '61.
(MIRA 14:6)
(CLOSTRIDIUM)   (X RAYS--PHYSIOLOGICAL EFFECT)

OGANESYAN, A.S., kand.med.nauk; ZHIDOVTSEVA, M.I., kand.med.nauk

Bilateral ligation of the internal arteries of the mammary glands in stenocardia. Vrach. delo no.4:37-41 Ap '61.   (MIRA 14:6)

1. Kafedra khirurgicheskikh bolezney (zav. - zasluzhennyy deyatel' nauki, prof. G.M.Gurevich) i kafedra vnutrennikh bolezney (zav. - prof. P.F.Frolov) Khar'kovskogo meditsinskogo instituta.
    (ANGINA PECTORIS)   (ARTERIES--LIGATURE)
            (MAMMARY GLANDS)

ZHIDOVTSEVA, M. I.; Master Med Sci (diss) -- "Evaluation of the functional

state of the liver and pancreas in various stages of hypertension". Khar'kov,

1958. 14 pp (Khar'kov State Med Inst), 200 copies (KL, No 6, 1959, 143)

ZHIDYAYEV, O., inzhener.

Piercing a ray of light for adjusting shafting. Mor.flot. 16 no.9:
12-14 S '56.
(MIRA 9:10)

1.Akademiya morskogo flota.
                    (Shafts and shafting)

ZHIDYAYEV, O.

...ential problems of ship repair. Mor. flot 18 no.2:11-12 F '58.

(MIRA 11:2)

1.Vedushchiy konstruktor TSentral'nogo proyektno-konstruktorskogo
byuro No. 1 Ministerstva morskogo flota.
              (Ships--Maintenance and repair)

GARMASHEV, Dmitriy Leonidovich, kand. tekhn. nauk; KUDRYAVTSEV, Fedor Aleksan-
drovich, inzh.; MARKOV, Aleksandr Panteleymonovich, inzh.; GERSHTEYN,
Yu.S., inzh., retsenzent; ROKHLIN, A.G., kand. tekhn. nauk, retsen-
zent; ZHIDYAYEV, O.A., nauchnyy red.; OZEROVA, Z.V., red.; KRYAKOVA,
D.M., tekhn. red.

[Modern methods of assembling marine shafting] Sovremennye metody
montazha sudovykh valoprovodov. Izd.2., ispr. i dop. Leningrad,
Gos. soiuznoe izd-vo sudostroit. promyshl., 1961. 280 p.

(Shafting)   (Ships—Equipment and supplies)   (MIRA 14:10)

ZHIDYAYEV, O.A., inzhener.

Laying and checking ship shaft lines. Rech. transp. 15 no.2:21-26
F '56.   (Shafts and shafting)
(MIRA 9:6)

S/081/63/000/004/018/051
B166/B186

AUTHORS: Kalabina, A. V., Filippova, A. Kh., Aksenenko, R. A.,
Latysheva, E. S., Vinogradova, V. V., Zhidkayeva, L. M.

TITLE: Studies in the field of synthesis and conversions of vinyl aryl
esters. No. 22. Synthesis and certain reactions of vinyl
esters and acetals of bromophenols

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1963, 238 - 239, ab-
stract 4Zh123 (Izv. Fiz.-khim. n.-i. in-ta pri Irkutskom un-te,
v. 5, no. 1, 1961, 120 - 130)

TEXT: Vinylation of 2-bromophenol (I) and 4-bromophenol (II) by the Favor-
skiy - Shostakovskiy method (initial pressure of acetylene 8 - 28 atm
210 - 220°C, 30 - 45 min) in the presence of a large quantity of KOH or NaOH
and with high dilution of the reaction mixture with water (sometimes with
dioxane added) made possible the synthesis of the vinyl ester of I, yield
40%, b.p. 93 - 94°C/8 mm Hg, n^{20}_D 1.5676, d^{20}_4 1.4359, and the vinyl ester
of II (III), yield 12 - 52%, b.p. 215 - 216°C/728 mm Hg, 104 - 110°C/11 mm
Hg, n^{20}_D 1.5685, d^{20}_4 1.4366. The addition of I - II to aliphatic and

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Studies in the field of synthesis...

aromatic vinyl esters (with thorough stirring in the presence of 2 - 3 drops
concentrated HCl) gave a series of $CH_3CH(OH)OR'$ acetals (IV). Below
are given: the initial vinyl ether, quantity in moles, the initial phenol,
quantity in moles, reaction temp. in °C and the reaction time in hrs. R and
R' in IV, yield %, b.p. in °C/mm Hg, n^{20}_D and d^{20}_4: vinylethyl ether (V),
0.430, I, 0.300, 85 - 90, 1.5, C_2H_5, $0-BrC_6H_4$, 40, 155-15, 1.5223, 1.3208;
V, 0.120, II, 0.058, 70 - 75, 1.5, C_2H_5, $n-BrC_6H_4$ (IVa), 124 - 125/8, 1.5308,
1.3483; vinylbutyl ether, 0.679, II, 0.579, 75 - 86, 1, C_4H_9, $n-BrC_6H_4$ (IVb),
38, 155 - 156/17, 1.5051, 1.2364; vinylphenyl ether, 0.167, II, 0.167, 70 -
80, 2, C_6H_5, $n-BrC_6H_4$, 47.1, 171 - 173/6, 1.5831, 1.3784; III, 0.115, II,
0.104, 70 - 80, 2, $n-BrC_6H_4$ (IVc), 55, 216 - 217/8, m.; 46°C, 1.502 - -.

A study was made of substitution of the Br atom in III and IV by ethy and
ethoxyl groups. Experiments to hydrolyze III and IV with dilute alkali to
the respective vinyl esters of the phenols in an autoclave, 220 - 130°C, in
the presence of Cu_2Cl_2 and Cu shavings) were unsuccessful. To 55 mmoles
IVa in 20 ml cryoscopic C_6H_6 were added 0.08 moles C_2H_5Br and 0.13 moles Na,
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Studies in the field of synthesis...

S/081/61/000/004/018/05
B166.B05

which was thoroughly stirred for 2 hrs at 60 - 65°C and then left to stand for 12 hrs, whereupon it was filtered through glass and distilled to give IV (R = C_2H_5, R' = n-$C_2H_5C_6H_4$) (IVd), yield 50%, b.p. 93 - 94° 16 mm Hg, n^{20}_D 1.5008, d^{20}_4 0.9851. 5 g IVd and 20 ml 20% H_2SO_4 were heated for 3 hrs at ~100°C to give 4-ethylphenol (VI), yield 88%, b.p. 95 - 96°C, 2 mm Hg, n^{20}_D 1.5240. In the optimum experiment 0.054 moles IVb, 0.070 moles C_2H_5Br and 0.13 moles Na in 200 ml C_6H_6 were heated for 7 hrs at 80°C and, as stated above, IV were separated (R = C_4H_9, R' = $C_2H_5C_6H_4$), yield 89%, b.p. 140 - 142°C/17 mm Hg, n^{20}_D 1.4960, d^{20}_4 0.9275. Under similar conditions (85 - 90°C, 2.5 hrs) the vinyl ester of VI was produced, yield 10%, b.p. 92 - 93°C/18 mm Hg, n^{20}_D 1.5148. A mixture of 0.27 g vinyl ester, dry C_2H_5ONa, 10 ml C_6H_6 and 50 g Cu filings was kept at 150° for 6 hrs; it was then washed with 10% alkali and 4-ethoxyphenol vinyl ester was separated by distillation, yield 40%, b.p. 101 - 102°C/1 mm Hg, n^{20}_D 1.5152. See abstract 4Zh122. [Abstracter's note: complete translation.]

Card 3/3

CHEREPAKHIN, G.K., prof.; ZHIDYAYEVA, T.I.; TSYMBALINA, T.A.; VOSKRESENSKAYA,
L.Ye.; PIGOLKIN, N.I.

Prevention of ophthalmoblennorrhea in newborn infants by means of
a synthomycin emulsion. Sbor. nauch. rab. Kaf. akush. i gin. GMI
no.1:115-119 '60.
                                                        (MIRA 15:4)

1. Iz akushersko-ginekologicheskoy kliniki Gor'kovskogo meditsinskogo
instituta, zav.klinikoy - prof. G.K.Cherepakhin.
        (CHLOROMYCETIN)   (CONJUNCTIVITIS, INFANTILE)

ZAKHARKIN, L.I.; ZHIGAREVA, G.G.

Reaction of triisobutylborine and diborane with styrene. Izv. AN
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1. Institut elementoorganicheskikh soyedineniy AN SSSR.
        (Borine)   (Styrene)   (Boron hydride)

HURD, Dallas, T.; BERLIN, L.Ye. [translator]; ZHIGACH, A.F., professor,
doktor khimicheskikh nauk, redaktor; OGANDZHANOVA, B.A., redaktor;
IOVLEVA, H.A., tekhnicheskiy redaktor

[An introduction to the chemistry of hydrides. Translated from the
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                (Hydrides)

ZHIGACH, A.F., dokter khimicheskikh nauk, professor; ANTONOV, I.S., kandidat
tekhnicheskikh nauk.

Use of hybrides in industry. Khim.prom.no.4:200-202 Je '56. (MIRA 9:10)
(Hydrides)

Zhigach, A.F.

USSR/Inorganic Chemistry. Complex Compounds.   C

Abs Jour   : Ref Shur - Khimiya, No. 8, 1957, 26449.

Author   : Zhigach, A.F., Kochneva, L.N.
Inst   :
Title   : Nitrogen Containing Derivatives of Diborane.

Orig Pub   : Uspekhi khimii, 1956, 25, No. 10,
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Abstract   : Review. Bibliography with 64 titles.

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ZHIGACH, A. F.

USSR/ Chemistry - Reaction processes

Card   1/2   Pub. 22 - 18, 23

Authors   : Zhigach, A. F., Kazakova,

Title   : Reaction of

Periodical : Dok. AN SSR   106/1, 69-7,

Abstract   : The

Presented by: Academician A. N. Nesmeyanov,

Card

Periodical :   Dok. AN SSSR 106/1, 69-71,

Abstract   stopped only after the